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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,327	03/01/2000	Paul S Prevey III	LRI-004PAT	3718

7590 07/05/2002

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EXAMINER

MARTIR, LILYBETT

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 07/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/516,327

Applicant(s)

PREVEY, PAUL S

Examiner

Lilybett Martir

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2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prevey III (Pat. 5,826,453). Prevey III teaches the claimed method including:

- Selecting a region of the part to be treated (Col. 8, line 55) and exerting pressure against the surface of the selected region (Col. 2, line 62), as in claim 1
- Exerting the pressure against the surface of the part by a burnishing operation (Col. 8, line 57), as in claim 2.
- A burnishing operation that induces a deep layer of compression within the surface having associated cold working of less than about 5.0 percent as disclosed in Col. 8, lines 57-60 as in claims 3 and 10.
- Exerting the pressure on the surface by inducing a deep layer of compression within the surface having associated cold working of less than about 3.5 percent (Col. 8, line 60), as in claims 4 and 11.
- Comprising the step of selecting the magnitude of compression by programming a control unit to automatically reduce the magnitude of compression (Col. 3, lines

37-40) in the direction towards the boundaries of the selected region, as in claim 5.

- Comprising in the step of exerting pressure against the surface of the selected region the step of programming a control unit to control the application of the pressure (Col. 3, lines 33-35), as in claim 6.
- A burnishing operation that includes varying the burnishing density along the the selected region (Col. 2, lines 57-60), as in claim 7.
- The part is selected from the group consisting of automotive parts, aircraft parts, marine parts, engine parts, motor parts, machine parts, drilling parts, construction parts and pump parts (Col. 4, line 4), as in claim 8.
- Selecting a region of the part to be treated (Col. 8, line 55) and programming a control unit of a burnishing apparatus to perform a burnishing operation (Col. 3, lines 4-8), the burnishing operation being performed such that the density of burnishing and the magnitude of compression are varied to reduce the high tensile stress zone along the boundaries of the selected region (Col. 2, lines 57-60), as in claim 9.

But he does not disclose:

- A pressure being applied such that the magnitude of compression decreases in the direction towards the boundaries of the selected region to minimize the effects of any tensile stress zones near the boundaries, as in claim 1.

Claim 1 discloses a pressure applied such that the magnitude of compression decreases in the direction toward the boundaries of the selected region, something that

would obviously result from providing a zone of deformation is formed by compressions of different magnitudes that are exerted over a surface in a selected pattern.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teachings of the burnishing method of Prevey, III by applying a pressure in a way such that the magnitude of compression decreases in the direction toward the boundaries of the selected region since the claimed process is a result of *selecting a predetermined pattern* following the previous teachings of Prevey (Col. 5, lines 4-12) by making it suitable to or fit for a specific use or situation without departing from the scope of his invention for the purpose of making said method versatile and adaptable.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Linzell (Pat. 5,643,055) Shaping metals. Discloses a way to shape a metal workpiece by rubbing contact over a surface that is continuous.
- Beckman et al. (Pat. 4,360,143) Method of manufacturing suspension members. Discloses a method for manufacturing suspension members by pre-testing and subjecting said members to maximum forces resulting in cold working.

Response to Arguments

Applicant's arguments filed on May 21, 2002 have been fully considered but they are not persuasive. Regarding applicant's arguments about Prevey III not teaching or suggesting less deformation of a surface towards the boundaries of a selected region, the teachings of Prevey, III (Pat. 5,826,453) do disclose and suggest the claimed invention

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since the application of a force to any surface using the burnishing apparatus with a burnishing ball such as in element 114 produces a surface deformation with less deformation of the surface toward the boundaries of the selected region if a desired path or a predetermined pattern of burnishing selected for this purpose is applied. Applicant's arguments are believed to be fully addressed in the office action presented above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Lilybett Martir
Examiner
Art Unit 2855



July 1, 2002



Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800